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Docket No.: KCC-13368.10

THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants: Maria RAIDEL
Franz ASCHENBRENNER

Serial No: 09/402,059

Filing Date: 14 February 2000

Title: ABSORBENT ARTICLE

Group No: 3761

Examiner: C. Anderson

APPLICANT'S BRIEF ON APPEAL

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to the Notice Of Appeal filed 16 August 2004, Applicant respectfully submits this Brief On Appeal, in triplicate. Also included is a check for \$340 to cover the fee set forth in 37 C.F.R. §41.20(b). Please charge any additional amount owed, or credit any overpayment, to Deposit Account No. 19-3550.

I. REAL PARTY IN INTEREST

The real party in interest is Hakle-Kimberly Deutschland GmbH, the assignee of the above-identified patent application.

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

11 October 2004
11 Oct. 2004
Date

Mandy Peterson
Signature

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 45-81 and 83-111 are pending, and are presented on appeal. Claims 45-49, 57-81, 83-86 and 94-111 are rejected. Claims 50-56 and 87-93 are objected to. The status of these claims (including amendments) is presented in Appendix A.

IV. STATUS OF AMENDMENTS

All amendments submitted thus far have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to an absorbent article. Independent Claim 45 recites an absorbent article comprising a liquid-permeable layer, a substantially liquid-impermeable layer, and an absorbent body between them. Independent Claim 62 recites an absorbent article comprising a substantially liquid-impermeable layer, an absorbent body connected to a central region of the substantially liquid-impermeable layer, and a liquid permeable layer over a side of the absorbent body opposite the substantially liquid-impermeable layer. Independent Claim 102 recites a hygiene article (which is one type of absorbent article) comprising a liquid-permeable layer, a substantially liquid-impermeable layer, and an absorbent body between them.

Each of Claims 45, 62 and 102 further recites that the absorbent body comprises an absorbent material which a) absorbs 10 ml or more of water per gram of absorbent material, and b) absorbs said water under conditions where no volume expansion is possible. This means that the absorbent material must be able to absorb at least 10 times its weight in water in an environment where the absorbent material cannot enlarge or expand.

The specification provides examples of absorbent articles, including sanitary napkins for feminine hygiene, panty liners, children's nappies/diapers and incontinence pads (p. 1, lines 11-13). Known absorbent articles may include conventional superabsorbent materials which absorb many times their dry weight of liquid, and which retain much of the liquid under pressure. Conventional superabsorbent materials are

described in European Patent Application 0,339,461 to Kellenberger et al., and are acknowledged in Applicant's specification (p. 1, line 33 – p. 2, line 2).

One characteristic of conventional superabsorbent materials used in absorbent articles is that they experience a volume increase (swell) when they absorb liquid. This swelling leads to a volume increase for the entire absorbent article, reducing wearer comfort. Furthermore, swollen superabsorbent materials (whether particles, fibers or flakes) tend to agglomerate and/or become sticky, so as to a) limit further penetration of liquid into the absorbent article, and b) prevent the superabsorbent material from shifting or flowing from one part of the absorbent body to another in a manner which facilitates wearer comfort (p. 2, lines 4-25).

The absorbent article of the present invention uses an absorbent material which remains able to shift and flow within an absorbent body, even after being in contact with a liquid. The resulting absorbent article retains its ability (after contact with a liquid) to optimally adapt and conform to the contours of a wearer's body, leading to increased wearer comfort. The absorbent article also maintains its ability to absorb further liquid, and is free of the blocking effects associated with conventional superabsorbent materials (p. 3, line 5 – p. 6, line 4).

One reason the absorbent material remains able to flow is that it absorbs and retains liquid with little or no increase in volume. When the absorbent material is placed in an absorbent article (an environment where a volume increase is possible), it absorbs much water, practically without any increase in volume (p. 5, lines 32-33, p. 15, lines 23-25). When the absorbent material is placed in an environment where no volume increase is possible, it absorbs at least 10 ml of water per gram of absorbent material without any expansion in volume (p. 14, Table 1; p. 15, lines 1-6).

The claim limitations calling for absorption of 10 ml or more of water per gram of absorbent material "under conditions where no volume expansion is possible" set forth a parameter which distinguishes the absorbent material over conventional superabsorbent materials. As explained above, these limitations do not reflect actual conditions in an absorbent article. Volume expansion is possible in an absorbent article.

The specification also illustrates how it is possible for an absorbent material to absorb 10 times its weight in water without expanding in volume. As illustrated on pp. 10-11, a preferred absorbent material, polymethylene urea, has a highly open and

porous matrix molecular structure. Water flowing into the polymethylene urea may occupy the open spaces in the matrix without expanding the molecular structure. Put another way, the preferred absorbent material has a “zeolitic” molecular structure which is capable of absorbing water (p. 13, lines 20-28). Even with high water absorption, no swelling of this material was detected (p. 15, lines 23-25).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues on appeal are:

A. whether the final rejection of Claims 45-49, 57-59, 62, 68-69, 71, 73-75, 83-86, 94-96, 102-105 and 107-111 (herein Group I) under 35 U.S.C. §102(b) as anticipated by European Patent Application 0,339,461 to Kellenberger should be upheld;

B. whether the final rejection of Claims 60, 61, 76, 78 and 79 (herein Group II) under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 5,904,672 to LeMahieu et al. should be upheld;

C. whether the final rejection of Claims 63 and 64 (herein Group III) under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 5,807,365 to Luceri should be upheld;

D. whether the final rejection of Claims 65, 66, 68, 70 and 72 (herein Group IV) under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 5,977,014 to Plischke et al. should be upheld;

E. whether the final rejection of Claims 80 and 81 (herein Group V) under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 3,794,034 to Jones, Sr. should be upheld;

F. whether the final rejection of Claims 97-101 and 106 (herein Group VI) under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 4,988,344 to Reising et al. should be upheld; and

G. whether the objection to Claims 50-56 and 87-93 (herein Group VII) as being dependent on a rejected base claim should be upheld.

VII. ARGUMENT

A. Claims 45-49, 57-59, 62, 68-69, 71, 73-75, 83-86, 94-96, 102-105 And 107-111 Are Not Anticipated By Kellenberger.

The Examiner rejected the claims of Group I based on anticipation over Kellenberger. In the final Office Action dated 19 April 2004, the Examiner opined, in pertinent part:

With respect to Claims 45, 46, 57, 59, 62, 68, 69, 82, 83, 94 and 102, Kellenberger discloses an absorbent article 10 having a liquid permeable layer 14, a liquid impermeable layer 12, and an absorbent body 16, as shown in figure 1. The absorbent body 16 comprises absorbent material, fibers 18 and particles 20, as shown in figure 2. The absorbent material is capable of absorbing more than 10 ml of water per gram of absorbent material under conditions where no volume expansion is possible. The absorbent material is described on page 5, lines 30-44 as able to absorb 27 ml per gram of absorbent material under a pressure of 21,000 dynes per cm², or under such a pressure that volume expansion is not possible . . . (4/19/04 Office Action, p. 2).

With respect to Claims 58 and 95, Kellenberger discloses on page 5, line 6, polyacrylate (4/19/04 Office Action, p. 5).

In the Advisory Action mailed 05 August 2004, the Examiner further clarified the rejection:

While Kellenberger discloses a test method that allows for volume expansion, the absorbent material disclosed by Kellenberger is comprised of the same materials as the claimed composition. The absorbent material of Kellenberger will therefore be inherently capable of fulfilling the claimed limitations if subjected to the claimed tests

Applicant's specification discloses three specific absorbent materials that are capable of absorbing 10 ml or more of water per gram of absorbent material under conditions where no volume expansion is possible. These materials are a) pure polymethylene urea, b) a mixture of polymethylene urea with 3% by weight polyacrylate, and c) a mixture of polymethylene urea with 6% by weight polyacrylate (p. 14, line 4 – p. 15, line 6). A fourth absorbent material, pure polyacrylate, was able to absorb only 1.6 ml of water per gram of absorbent material under conditions where no volume

expansion is possible (p. 15, lines 1-6). This is 84% below the minimum absorption required by independent Claims 45, 62 and 102.

As explained above, the Examiner initially cited Kellenberger as disclosing absorbent material that is “able to absorb 27 ml per gram of absorbent material under a pressure of 21,000 dynes per cm^2 , or under conditions where no volume expansion is possible” (4/19/04 Office Action, p. 2). In fact, Kellenberger discloses precisely the opposite.

Kellenberger discloses a superabsorbent material having an absorbency under load (AUL) of 27 grams aqueous saline solution per gram of superabsorbent, wherein the AUL is measured using a constant load of 21,000 dynes/ cm^2 . While absorbing the liquid, the volume of the superabsorbent material expands by an amount nearly equal to the volume of liquid absorbed. The superabsorbent material can only absorb the liquid if the superabsorbent is capable of performing work sufficient to overcome the restraining force (Kellenberger, p. 5, lines 42-53).

The test method for measuring AUL is described on page 7, lines 12-52 of Kellenberger, with respect to the apparatus shown in Fig. 11. The bottom portion of a cylinder 56 is filled with a predetermined amount of superabsorbent particles 66. A piston 60 machined to closely fit without binding to the cylinder 56 is placed on top of the superabsorbent particles. The piston 60, and a weight 62 placed above the piston 60, are designed to provide a constant load of 21,000 dynes/ cm^2 (about 0.3 psi) on the superabsorbent particles 66.

The superabsorbent particles 66 rest above a filter paper 64 and porous plate 57, which are in fluid communication with a liquid holding tank via the illustrated conduit. Fluid which passes through the porous plate 57 and filter paper 64 is picked up and absorbed by the superabsorbent particles. As further explained by Kellenberger:

The amount of fluid pickup measured after one hour is the AUL value, however, the rate of fluid pickup can also be measured. Two checks can be made to insure the accuracy of the instantaneous final readout. The height the piston 60 rises multiplied by the cross-sectional area of the cylinder 56 should nearly equal the amount of fluid picked up and the cylinder apparatus 50 can be weighed before and after the test, with the difference in weight equaling the fluid pickup (p. 7, lines 41-45).

The fact that Kellenberger uses the movement of the piston as a cross-check to determine the weight of fluid absorbed reflects a volume expansion proportional to the volume of fluid absorbed. The superabsorbent particles expand proportionally to the volume of fluid absorbed, regardless of the level of absorption.

A primary objective of Kellenberger is to provide superabsorbent materials which swell under pressure. This is apparent from the Kellenberger specification:

For purposes of this application the ability of a superabsorbent material to swell under an applied force and thereby perform work is quantified as the Absorbency Under Load or AUL (page 5, lines 30-31).

The AUL is thought to be a function of the following factors: (1) gel stiffness while swelling . . . (page 5, lines 39-40).

When the superabsorbent material of the present invention has a dry size within the defined ranges and does not break apart into smaller units when wetted, it will, upon swelling, generally expand such that it maintains a capillary structure in the matrix (page 6, lines 27-29).

The Examiner cited Kellenberger at page 5, line 6, as disclosing the polyacrylate recited in Applicant's Claims 58 and 95 (4/19/04 Office Action, p. 5). While Claims 58 and 95 recite the presence of a polyacrylate, these claims further limit the underlying independent Claims 45 and 62. Claims 45 and 62 both require:

an absorbent material which absorbs 10 ml or more of water per gram of absorbent material and absorbs said water under conditions where no volume expansion is possible.

Claims 58 and 95 read on the Examples in Table 1, page 14 of Applicant's specification, where the absorbent material contains 3% or 6% polyacrylate and a balance of polymethylene urea. Both Examples absorbed substantially more than 10 ml water per gram of absorbent material under conditions where no volume expansion is possible. Claims 58 and 95 do not read on the additional Example where the absorbent material contained 100% polyacrylate. This Example absorbed only 1.6 ml water per gram of absorbent material under conditions where no volume expansion is possible.

While Kellenberger discloses polyacrylate, it does not disclose an absorbent material (with or without polyacrylate) that absorbs 10 ml or more of water per gram of absorbent material under conditions where no volume expansion is possible. The complete list of superabsorbents disclosed in Kellenberger includes polyacrylamides, polyvinyl alcohol, ethylene maleic anhydride copolymers, polyvinyl ethers, hydroxypropylcellulose, carboxymethylcellulose, polymers and copolymers of vinyl sulfonic acid, polyacrylates, starch grafted polyacrylates and the like (page 5, lines 3-6). None of the disclosed superabsorbents has a zeolitic molecular structure, or an other molecular structure that would permit substantial absorption of water without volume expansion. To the contrary, the superabsorbents are collectively described as having a “swelling nature” and “ability to swell against an applied pressure” (p. 5, lines 14 and 24-29). The disclosed superabsorbents “can only absorb liquid if the superabsorbent is capable of performing work sufficient to overcome the restraining force” (p. 5, lines 48-49).

Finally, in the Advisory Action, the Examiner alleged that the absorbent material of Kellenberger is “comprised of the same materials” as the claimed composition and, therefore, “inherently capable of fulfilling the claimed limitations.” Again, Applicant has shown that an absorbent material comprising only a swellable superabsorbent (as described in Kellenberger) will not satisfy Applicant’s claim limitations. The claimed absorbent material must have the overall ability to absorb at least 10 ml water per gram of absorbent material under conditions where no volume expansion is possible. This limitation will not be satisfied if the swellable superabsorbent material (e.g. polyacrylate) is present in a high enough percentage to require swelling of the overall absorbent material composition during absorption (specification, p. 14).

A rejection based on anticipation can only be sustained if a single reference discloses each and every limitation of the rejected claims, either expressly or inherently. When the rejection is based on anticipation by inherency, extrinsic evidence may be used to establish the presence of an inherent characteristic that is not described in the reference. Such evidence must make it clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Continental Can Co., U.S.A. v. Monsanto Co., 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991).

It is undisputed that Kellenberger does not expressly disclose an absorbent material capable of absorbing 10 ml of water or more per gram of absorbent material, under conditions where no volume expansion is possible. The Examiner has presented no evidence that the swellable superabsorbent materials of Kellenberger inherently possess this property. The Kellenberger specification, and Applicant's own specification, provide overwhelming evidence to the contrary. No claim is anticipated. The rejection of the claims of Group I based on anticipation should be reversed.

**B. Claims 60, 61, 76, 78 And 79 Are Not Obvious
Over Kellenberger In View Of LeMahieu Et Al.**

Claims 60 and 61 depend from Claim 45. Claims 76, 78 and 79 depend from Claim 62. Each of these claims in Group II incorporates the limitations of the underlying independent claim, including the requirements of:

an absorbent material which absorbs 10 ml or more of water per gram of absorbent material, and absorbs said water under conditions where no volume expansion is possible.

As explained above, Kellenberger does not disclose an absorbent material satisfying these claim limitations. LeMahieu et al. also does not disclose such an absorbent material. Accordingly, these references cannot be combined in any fashion to arrive at the claimed invention.

Furthermore, Claims 60, 61, 76, 78 and 79 require the absorbent body (located between the liquid-permeable layer and the substantially liquid-impermeable layer) to include at least one care substance. The Examiner cites the Example traversing Cols. 23-24 of LeMahieu et al. as disclosing these claim limitations. However, the care substance disclosed in LeMahieu et al. (aloe vera) is present in tissues located in waist regions of the absorbent article. LeMahieu et al. acknowledges the existence of an absorbent assembly (Col. 23, lines 46-49) but does not disclose a care substance in or on the absorbent assembly.

Finally, the Examiner has not provided a suggestion to combine the two references, but instead relies on impermissible hindsight. A suggestion to combine references must be found in the prior art, and cannot be gleaned from Applicant's

disclosure. In Re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). For these reasons, the obviousness rejection of the claims of Group II should be reversed.

Claim 77 (which recites similar subject matter) has not been rejected. Claim 77 should be allowed.

C. Claims 63 And 64 Are Not Obvious Over Kellenberger In View Of Luceri

Claims 63 and 64 (the claims of Group III) depend from Claim 62. Each of these claims incorporates the limitations of Claim 62, including the requirement of:

an absorbent material which absorbs 10 ml or more of water per gram of absorbent material, and absorbs said water under conditions where no volume expansion is possible.

As explained above, Kellenberger does not disclose an absorbent material satisfying these claim limitations. Luceri also does not disclose such an absorbent material. Accordingly, the references cannot be combined in any fashion to arrive at the claimed invention.

Furthermore, the Examiner has not provided a suggestion to combine the two references, and again relies on hindsight. For these reasons, the obviousness rejection of the claims of Group III should be reversed.

D. Claims 65, 66, 68, 70 And 72 Are Not Obvious Over Kellenberger In View Of Plischke Et Al.

Claims 65, 66, 68, 70 and 72 (the claims of Group IV) depend from Claim 62. Each of these claims incorporates the limitations of Claim 62, including the requirement of:

an absorbent material which absorbs 10 ml or more of water per gram of absorbent material, and absorbs said water under conditions where no volume expansion is possible.

As explained above, Kellenberger does not disclose an absorbent material satisfying these claim limitations. Plischke et al. also does not disclose such an absorbent

material. Accordingly, these references cannot be combined in any fashion to arrive at the claimed invention.

Furthermore, Claims 65 and 66 require the absorbent body to comprise a secondary storage layer including a soft absorbent material. Examples of soft absorbent materials are coform materials, airlaid materials, tissue-cotton wools, and combinations thereof (See Claim 66). The Examiner cites Col. 16, lines 38-40 as disclosing these materials. The cited passage refers to a substrate layer (which may or may not be absorbent, and may or may not be soft). The reference does not disclose any of Applicant's claimed soft absorbent materials.

Claim 68 requires the absorbent body to comprise a fibrous matrix, with the absorbent material disposed in the matrix. Plischke et al. discloses a fibrous substrate layer, yet the absorbent material is apparently not disposed within it (Col. 16, lines 25-59).

Claims 70 and 72 require two or more layers of a fibrous material, with the absorbent material disposed between them. Plischke et al. does not disclose the two or more layers.

Finally, the Examiner has not provided a suggestion to combine the references, and again relies on hindsight. For these reasons, the obviousness rejection of the claims of Group IV should be reversed.

Claim 67 depends from Claim 65, and has not been rejected. Claim 67 should be allowed.

**E. Claims 80 And 81 Are Not Obvious Over
Kellenberger In View Of Jones, Sr.**

Claims 80 and 81 (the claims of Group V) depend from Claim 62. Each of these claims incorporates the limitations of Claim 62, including the requirement of:

an absorbent material which absorbs 10 ml or more of water per gram of absorbent material, and absorbs said water under conditions where no volume expansion is possible.

As explained above, Kellenberger does not disclose an absorbent material satisfying these claim limitations. Jones, Sr. et al. also does not disclose such an absorbent

material. Accordingly, these references cannot be combined in any fashion to arrive at the claimed invention.

Furthermore, the Examiner has not provided a suggestion to combine the references, and again relies on hindsight. For these reasons, the obviousness rejection of the claims of Group V should be reversed.

**F. Claims 97-101 And 106 Are Not Obvious
Over Kellenberger In View Of Reising Et Al.**

Claims 97-101 depend from Claim 62. Claim 106 depends from Claim 102. Each of these claims in Group VI incorporates the limitations of the underlying independent claim, including the requirement of:

an absorbent material which absorbs 10 ml or more of water per gram of absorbent material, and absorbs said water under conditions where no volume expansion is possible.

As explained above, Kellenberger does not disclose an absorbent material satisfying these claim limitations. Reising et al. also does not disclose such an absorbent material. Accordingly, these references cannot be combined in any fashion to arrive at the claimed invention.

Furthermore, the Examiner has not provided a suggestion to combine the references, and again relies on hindsight. For these reasons, the obviousness rejection of the claims of Group VI should be reversed.

**G. The Objection To Claims 50-56 And 87-93
Should Be Overruled**

Claims 50-56 and 87-93 were objected to as depending from rejected base claims, and were otherwise held to recite allowable subject matter. Claims 50-56 depend from Claim 45. Claims 87-93 depend from Claim 62.

For the reasons explained with respect to the claims of Group I, the rejection of Claims 45 and 62 based on anticipation should be reversed. Accordingly, the objection to Claims 50-56 and 87-93 should be withdrawn.

VIII. CONCLUSION

The claim rejections based on 35 U.S.C. §102(b) and/or §103(a) should be reversed. All pending claims should be allowed. Applicants respectfully request passing of this case to allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Maxwell J. Petersen".

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APPENDIX A: CLAIMS ON APPEAL

45. An absorbent article, comprising:
a liquid-permeable layer;
a substantially liquid-impermeable layer; and
an absorbent body between the liquid-permeable layer and the substantially liquid-impermeable layer;
the absorbent body comprising an absorbent material which absorbs 10 ml or more of water per gram of absorbent material and absorbs said water under conditions where no volume expansion is possible.

46. The absorbent article of Claim 45, wherein the absorbent material comprises absorbent particles.

47. The absorbent article of Claim 46, wherein the absorbent particles comprise spherical particles.

48. The absorbent article of Claim 46, wherein the absorbent particles have a diameter of about 100-2000 microns.

49. The absorbent article of Claim 46, wherein the absorbent particles have a diameter of about 200-800 microns.

50. The absorbent article of Claim 45, wherein the absorbent material comprises polymethylene urea.

51. The absorbent article of Claim 50, wherein the polymethylene urea constitutes at least about one third by weight of the absorbent material.

52. The absorbent article of Claim 50, wherein the polymethylene urea constitutes at least about one half by weight of the absorbent material.

53. The absorbent article of Claim 50, wherein the polymethylene urea constitutes at least about two thirds by weight of the absorbent material.

54. The absorbent article of Claim 50, wherein the polymethylene urea constitutes at least about 80% by weight of the absorbent material.

55. The absorbent article of Claim 50, wherein the absorbent material consists essentially of the polymethylene urea.

56. The absorbent article of Claim 50, wherein the polymethylene urea is substantially free of ether groups and formaldehyde.

57. The absorbent article of Claim 45, wherein the absorbent material comprises a superabsorbent material.

58. The absorbent article of Claim 57, wherein the superabsorbent material comprises a polyacrylate.

59. The absorbent article of Claim 45, wherein the absorbent body further comprises a fibrous matrix, and the absorbent material is disposed within the matrix.

60. The absorbent article of Claim 45, wherein the absorbent body further comprises at least one care substance.

61. The absorbent article of Claim 60, wherein the care substance comprises a material selected from extracts of aloe vera, marigold, chamomile, and combinations thereof.

62. The absorbent article, comprising:
a substantially liquid-impermeable layer;
an absorbent body connected to the substantially liquid-impermeable layer
in a central region of the substantially liquid-impermeable layer; and
a liquid permeable layer over a side of the absorbent body opposite the
substantially liquid-impermeable layer;
the absorbent body comprising an absorbent material which absorbs 10 ml
or more of water per gram of absorbent material and absorbs said water under conditions
where no volume expansion is possible.

63. The absorbent article of Claim 62, wherein the absorbent body and
substantially liquid-impermeable layer are connected using an adhesive.

64. The absorbent article of Claim 62, wherein the absorbent body and
substantially liquid-impermeable layer are connected using one or more seams.

65. The absorbent article of Claim 62, wherein the absorbent body
further comprises a secondary storage layer including a soft absorbent material.

66. The absorbent article of Claim 65, wherein the soft absorbent
material comprises a material selected from coform materials, airlaid materials, tissue
cotton-wools, and combinations thereof.

67. The absorbent article of Claim 65, wherein the soft absorbent
material comprises a nonwoven material selected from spunbond fabrics, carded webs,
and combinations thereof.

68. The absorbent article of Claim 62, wherein the absorbent body
further comprises a fibrous matrix, and the absorbent material is disposed within the
matrix.

69. The absorbent article of Claim 68, wherein the absorbent material is disposed substantially homogeneously within the matrix.

70. The absorbent article of Claim 62, wherein the absorbent body further comprises two or more layers of a fibrous material, and the absorbent material is disposed between the layers of fibrous material.

71. The absorbent article of Claim 68, wherein the fibrous matrix comprises a material selected from cellulose, a cellulose/polypropylene mixture, a coform material, and combinations thereof.

72. The absorbent article of Claim 70, wherein the two or more layers of fibrous material comprise a material selected from cellulose, a cellulose/polypropylene mixture, a coform material, and combinations thereof.

73. The absorbent article of Claim 68, wherein the absorbent body comprises the fibrous material and absorbent material in a weight ratio of about 99-75% fibrous material to about 1-25% absorbent material.

74. The absorbent article of Claim 73, wherein the weight ratio is about 95-80% fibrous material to about 5-20% absorbent material.

75. The absorbent article of Claim 73, wherein the weight ratio is about 90-85% fibrous material to about 10-15% absorbent material.

76. The absorbent article of Claim 62, wherein the absorbent body further comprises at least one care substance.

77. The absorbent article of Claim 76, wherein the care substance comprises a material selected from extracts of aloe vera, marigold, chamomile, and combinations thereof.

78. The absorbent article of Claim 76, wherein the care substance is enclosed in microcapsules.

79. The absorbent article of Claim 78, wherein the care substance is releaseable from the microcapsules in response to heat or pressure.

80. The absorbent article of Claim 62, wherein the absorbent material is treated with a substance selected from bactericidal, fungicidal and viricidal substances, and combinations thereof.

81. The absorbent article of Claim 80, wherein the substance comprises a bactericidal substance selected from chlorinated levulinic acid, alkyl dimethylbenzylammonium halogenides, and combinations thereof.

83. The absorbent article of Claim 62, wherein the absorbent material comprises absorbent particles.

84. The absorbent article of Claim 83, wherein the absorbent particles comprise spherical particles.

85. The absorbent article of Claim 83, wherein the spherical particles have a diameter of about 100-2000 microns.

86. The absorbent article of Claim 83, wherein the spherical particles have a diameter of about 200-800 microns.

87. The absorbent article of Claim 62, wherein the absorbent material comprises polymethylene urea.

88. The absorbent article of Claim 87, wherein the polymethylene urea constitutes at least one third of the absorbent material.

89. The absorbent article of Claim 87, wherein the polymethylene urea constitutes at least one half of the absorbent material.

90. The absorbent article of Claim 87, wherein the polymethylene urea constitutes at least two thirds of the absorbent material.

91. The absorbent article of Claim 87, wherein the polymethylene urea constitutes at least 80% of the absorbent material.

92. The absorbent article of Claim 87, wherein the absorbent material consists essentially of the polymethylene urea.

93. The absorbent article of Claim 87, wherein the polymethylene urea is substantially free of ether groups and formaldehyde.

94. The absorbent article of Claim 62, wherein the absorbent material comprises a superabsorbent material.

95. The absorbent article of Claim 94, wherein the superabsorbent material comprises a polyacrylate.

96. The absorbent article of Claim 62 having a length and a width, wherein the absorbent body comprises at least one core which contains the absorbent material, the core having a length that is less than or equal to the length of the absorbent article, and a width that is less than or equal to the width of the absorbent article.

97. The absorbent article of Claim 62, wherein the absorbent body comprises at least two chambers, and at least one wall between the chambers.

98. The absorbent article of Claim 97, wherein the wall is aligned in a longitudinal direction of the absorbent article.

99. The absorbent article of Claim 97, wherein the wall is aligned in a transverse direction of the absorbent article.

100. The absorbent article of Claim 97, comprising at least one wall aligned in a longitudinal direction of the absorbent article and at least one wall aligned in a transverse direction of the absorbent article.

101. The absorbent article of Claim 96, wherein the core comprises a plurality of chambers.

102. A hygiene article, comprising:
a liquid-permeable layer;
a substantially liquid-impermeable layer; and
an absorbent body between the liquid-permeable layer and the substantially liquid-impermeable layer;
the absorbent body comprising an absorbent material which absorbs 10 ml or more of water per gram of absorbent material and absorbs said water under conditions where no volume expansion is possible.

103. The hygiene article of Claim 102, comprising a feminine hygiene article.

104. The hygiene article of Claim 102, comprising a sanitary napkin.

105. The hygiene article of Claim 102, comprising a panty liner.

106. The hygiene article of Claim 102, wherein the liquid-permeable layer comprises a central aperture.

107. The absorbent article of Claim 45, comprising a diaper.

108. The absorbent article of Claim 45, comprising an incontinence pad.
109. The absorbent article of Claim 62, comprising a feminine hygiene article.
110. The absorbent article of Claim 62, comprising a diaper.
111. The absorbent article of Claim 62, comprising an incontinence pad.